

Claims

I claim:

1. A wireless voice over Internet Protocol telephone, comprising:

a wireless handset that comprises a wireless personal area network transceiver, a wireless
5 local area network transceiver, and a selecting device;

wherein the selecting device selects the wireless personal area network transceiver when
the wireless personal area network transceiver detects a wireless personal area network
connection, otherwise the selecting device selects the wireless local area network transceiver.

10 2. The wireless voice over Internet Protocol telephone of claim 1, further comprising
a base station that comprises, a wireless personal area network transceiver for communicating
with the wireless personal area network transceiver of the wireless handset.

3. The wireless voice over Internet Protocol telephone of claim 2, the base station
15 further comprising a network interface card, wherein the base station notifies a wireless local
area network when a wireless personal area network signal from the wireless handset is not
detected.

4. The wireless voice over Internet Protocol telephone of claim 2, wherein the
20 wireless personal area network transceiver of the base station is a Bluetooth transceiver and the
wireless personal area network transceiver of the wireless handset is a Bluetooth transceiver.

5. The wireless voice over Internet Protocol telephone of claim 2, wherein the wireless personal area network transceiver of the base station is an infrared transceiver and the wireless personal area network transceiver of the wireless handset is an infrared transceiver.

5 6. The wireless voice over Internet Protocol telephone of claim 2, further comprising a phone controller, wherein the phone controller is communicatively coupled to the at least one access point over a local area network, and to the base station.

7. The wireless voice over Internet Protocol telephone of claim 1, wherein the
10 wireless local area network transceiver is an 802.11x transceiver.

8. The wireless voice over Internet Protocol telephone of claim 1, wherein the wireless personal area network transceiver is an infrared transceiver.

15 9. The wireless voice over Internet Protocol telephone of claim 1, wherein the wireless personal area network transceiver is a Bluetooth transceiver.

10. A system for sending and receiving voice over Internet Protocol using a wireless voice over Internet Protocol telephone, comprising:

20 a telephone, the telephone comprising:

a wireless handset having a wireless personal area network transceiver and a wireless local area network transceiver, and

a base station having a network interface card and a wireless personal area network transceiver;

an access point; and

a controller communicatively coupled to the base station and to the access point via a

5 local area network.

11. The system of claim 10, wherein the wireless local area network transceiver is an 802.11x transceiver.

10 12. The system of claim 10, wherein the wireless personal area network transceiver of the wireless handset and the wireless personal area network transceiver of the base station are one of the group consisting of a Bluetooth transceiver and an infrared transceiver.

13. The system of claim 10, wherein the local area network comprises one of a group
15 consisting of an Ethernet network and a Token Ring network.

14. A method for a wireless handset to send and receive voice over Internet Protocol using a wireless voice over Internet Protocol telephone, comprising the steps of:

transmitting a communications signal over a wireless personal area network transceiver
20 from the wireless handset to a base station;

determining when the wireless handset is out of range of the base station; and

activating a wireless local area network transceiver by the base station.

15. The method of claim 14 wherein the wireless local area network transceiver is at a remote location and communicatively coupled to the base station.

16. The method of claim 14, further comprising the step of establishing a communications channel between a base station and a wireless handset using the wireless personal area network transceiver.

17. The method of claim 16, wherein the wireless personal area network transceiver is a Bluetooth transceiver.

18. The method of claim 16 further comprising authenticating the wireless handset by the base station.

19. The method of claim 18, wherein the wireless local area network transceiver is an 802.11x transceiver.

20. The method of claim 19, further comprising:
receiving the communications signal over the wireless local area network transceiver by an access point coupled to the wireless local area network; and
forwarding the communications signal from the access point to a controller that routes the signal to a destination.

21. The method of claim 14, wherein the communications signal comprises a voice over Internet Protocol data stream.

22. The method of claim 14, further comprising the steps of:

5 detecting when the wireless handset is within range of the base station; and
establishing a communications session between the wireless handset and the base.

23. The method of claim 22 further comprising:

deactivating the wireless local area network transceiver by the base station.

10 24. A method for a wireless handset to communicate to a local area network, the wireless handset suitably adapted to communicate with a corresponding base station, the base station being connected to the local area network, the steps comprising:

establishing a connection with the base station via a first transceiver when the wireless
15 handset is within range of the base station; and

switching to a second transceiver and connecting to the local area network via the second transceiver when the wireless handset is outside the range of the base station.

25. The method of claim 24 wherein the second transceiver is a higher powered
20 transceiver than the first transceiver.

26. The method of claim 24 wherein the first transceiver is a Bluetooth compatible transceiver.

27. The method of claim 26 wherein the second transceiver is an 802.11 compatible transceiver.

5 28. The method of claim 27 further comprising re-establishing the connection with the base station via a first transceiver when the wireless handset returns to being within range of the base station.

29. The method of claim 28 further comprising switching power off to the second
10 transceiver after re-establishing the connection with the base station.

30. A method for a base station to facilitate communications between an associated wireless handset and a local area network, the steps comprising:

establishing a communications session between the wireless handset and the base station
15 when the wireless handset is within range of the base station, the base station forwarding packets between the wireless handset and the local area network; and

notifying a device on the local area network when the base station loses contact with the wireless handset.

20 31. The method of claim 30, the establishing step further comprises authenticating the wireless handset.

32. The method of claim 31 wherein the communications session is a Bluetooth compatible session.

33. The method of claim 30 wherein the notifying step further comprises sending data
5 necessary for authenticating the wireless handset to the local area network.